

**SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT**

Thermal Energy Development, Corp., Ltd.

**FINAL ENGINEERING EVALUATION
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ATTACHMENT A - DETAILED FACILITY PRINTOUT

ATTACHMENT B - INSIGNIFICANT ACTIVITIES OR EQUIPMENT

ATTACHMENT C - CURRENT ATCS AND PTOS

TITLE V APPLICATION REVIEW

Project #: 960621

Deemed Complete: 5/19/97

Engineer: Juscelino Siongco

Date: December 12, 2001

Facility Number: N-1026

Facility Name: Thermal Energy Development Corp., Ltd.

Mailing Address: P.O. Box 1209
Tracy, CA 95378-1209

Contact Name: Douglas Tomison

Phone: (209) 835-6914

Responsible Official: Douglas Tomison

Title: Plant Operations Superintendent

I. PROPOSAL

Thermal Energy Development Corp, Ltd. is proposing that an initial Title V permit be issued for its Biomass Fuel Plant facility in Tracy, CA. The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with those applicable requirements, and to provide the legal and factual basis for proposed permit conditions.

II. FACILITY LOCATION

Thermal Energy Development Dev. Corp, Ltd., 14800 W Schulte Rd, Tracy, CA 95377

III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is shown in Attachment A.

A summary of the exempt equipment categories, which describe the insignificant activities or equipment at the facility not requiring a permit, is shown in Attachment B.

IV. GENERAL PERMIT TEMPLATE USAGE

The applicant is requesting to use the following model general permit Templates:

A. SJV-UM-0-1, Facility Wide Umbrella

The applicant has requested to utilize template No. SJV-UM-0-1, Facility Wide Umbrella, for this facility. Based on the information submitted in the Template Qualification Form, the applicant qualifies for the use of this template.

B. SJV-IC-1-0, Series 1 Internal Combustion Engines

The applicant has requested to utilize template No. Series 1 Internal Combustion Engines for the emergency Standby Diesel Engine/Fire Pump, permit unit N-1026-2-1 and for the emergency Generator/Diesel Engine permit unit N-1026-9-1. Based on the information submitted in the Template Qualification Form, the applicant qualifies for the use of this template.

V. SCOPE OF EPA AND PUBLIC REVIEW

Certain segments of the proposed Operating Permit are based on model general permit templates that have been previously subject to EPA and public review. The terms and conditions from the model general permit templates are included in the proposed permit and are not subject to further EPA and public review.

For permit applications utilizing model general permit templates, public and agency comments on the District's proposed actions are limited to the applicant's eligibility for model general permit template, applicable requirements not covered by the model general permit template, and the applicable procedural requirements for issuance of Title V Operating Permits.

The following permit conditions, including their underlying applicable requirements, originate from model general permit templates and are not subject to further EPA and Public review:

Conditions 1-39 of the Facility Wide Requirements N-1026-0-1

Conditions 1-11 on the requirements for permit unit N-1026-2-1 and permit unit N-1026-9-1.

VI. APPLICABLE REQUIREMENTS ADDRESSED BY GENERAL PERMIT TEMPLATES

District Rule 1100, Equipment Breakdown, (as amended December 17, 1992)¹

District Rule 1160, Emission Statements (as adopted November 18, 1992)¹

District Rule 2010, Permits Required (as amended December 17, 1992)¹

District Rule 2020, Exemptions (as amended July 21, 1994)¹

District Rule 2031, Transfer of Permits (as amended December 17, 1992)¹

District Rule 2040, Applications (as amended December 17, 1992)¹

District Rule 2070, Standards for Granting Applications (as amended December 17, 1992)¹

District Rule 2080, Conditional Approval (as amended December 17, 1992)¹

District Rule 2520, Federally Mandated Operating Permits Sections 9.5.1, 9.5.2, 9.6.1, 9.6.2, 9.8, 9.9.1, 9.9.2, 9.9.3, 9.9.4, 9.9.5, 9.10, 9.13.1, 9.14.1, 9.14.2, 9.17, and 10.0 (adopted June 15, 1995)¹

District Rule 2520, Federally Mandated Operating Permits Section 9.4.2, 9.5.2 (Adopted June 15, 1995)²

District Rule 4101, Visible Emissions (as amended December 17, 1992)¹

District Rule 4601 Architectural Coatings (as amended December 17, 1992)¹

District Rules 8020, 8030, and 8060, Fugitive Dust (PM-10) Emissions (as amended April 25, 1996)¹

40 CFR Part 61, Subpart M, National Emission Standard for Asbestos¹

40 CFR Part 82, Subpart F, Stratospheric Ozone¹

¹ Conditions from Model General Template SJV-UM-0-1 addressed these facility-wide requirements (N-1026-0-1)

² Conditions from Model General Permit Template SJV-IC-1-0 addressed these requirements for permit unit N-1026-2 and for permit unit N-1026-9.

District Rule 4201, Particulate Matter Concentration (as amended December 17, 1992) ²

County Rule 407, Sulfur Compounds²

VII. APPLICABLE REQUIREMENTS NOT ADDRESSED BY GENERAL PERMIT TEMPLATES

District New and Modified Stationary Source Review Rule

District Rule 1080, Stack Monitoring (Amended December 17, 1992)

District Rule 1081, Source Sampling (Amended December 16, 1993)

District Rule 2520, Federally Mandated Operating Permits Sections 9.4.2 and 9.5.2 (Adopted June 15, 1995)

District Rule 4001, New Source Performance Standards (Amended April 14, 1999)

District Rule 4201, Particulate Matter Concentration (Amended December 17, 1992)

District Rule 4202, Particulate Matter - Emission Rate (Amended December 17, 1992)

District Rule 4301, Fuel Burning Equipment (Amended December 17, 1992)

District Rule 4352, Solid Fuel Fired Boilers, 5.1, 5.3 (Amended October 19, 1995)

District Rule 4801, Sulfur Compound (Amended December 17, 1992)

40 CFR Part 60 Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

VIII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE

For each Title V source, the District issues a single permit that contains the Federally Enforceable requirements, as well as the District-only requirements. The District-only requirements are not a part of the Title V Operating Permits. The terms and conditions that are part of the facility's Title V permit are designated as Federally Enforceable Through Title V Permit.

District Rule 4102, Nuisance (Amended December 17, 1992)

For this facility, condition 40 of Operating Permits N-1026-0-1 (Facility Wide Requirements) is not Federally Enforceable through Title V.

IX. COMPLIANCE

A. Requirements Addressed by Model General Permit Templates

1. Facility-Wide Requirements

The applicant is proposing to use a general permit template to address federally applicable facility-wide requirements. Section IV of template SJV-UM-0-1 includes a demonstration of compliance for all applicable requirements. Template conditions have been added to requirements for permit unit N-1026-0-1 as condition numbers 1 through 39 to assure compliance with these requirements.

2. One Emergency Standby Diesel Engine/Fire Pump and One Emergency Generator/Diesel Engine

The applicant is proposing to use general permit templates to address federally applicable requirements for the Emergency Standby Diesel Engine N-1026-2-1 and for the Emergency Generator/Diesel Engine N-1026-9-1. Section IV of template SJV-IC-1-0 includes a demonstration of compliance for applicable requirements. Template conditions have been added to requirements for permit unit N-1026-2-1 as condition numbers 1 through 11 and for permit unit N-1026-9-1 as condition numbers 7 through 15 to assure compliance with these requirements.

B. Requirements Not Addressed by Model General Permit Templates

1. New and Modified Stationary Source Review Rule (NSR)

a. 259 MMBtu/HR Biomass fired Boiler serving a 20.5 MW Electrical Generator(N-1026-1-3)

Permit unit N-1026-1-4 was subject to the NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 1 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 2 of the requirements for this permit unit.
- Condition 3 of the PTO has been included as condition 3 of the requirements for this permit unit.
- Condition 4 of the PTO has been included as condition 4 of the requirements for this permit unit.
- Condition 5 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 6 of the PTO has been included as condition 6 of the requirements for this permit unit.
- Condition 7 of the PTO has been included as condition 7 of the requirements for this permit unit.
- Condition 8 of the PTO has been included as condition 8 of the requirements for this permit unit.
- Condition 9 of the PTO has been included as condition 9 of the requirements for this permit unit.
- Condition 10 of the PTO has been included as condition 10 of the requirements for this permit unit.
- Condition 11 of the PTO has been included as condition 11 of the requirements for this permit unit.
- Condition 12 of the PTO has been included as condition 12 of the requirements for this permit unit.
- Condition 13 of the PTO has been included as condition 13 of the requirements for this permit unit.
- Condition 14 of the PTO has been included as condition 14 of the requirements for this permit unit.
- Condition 15 of the PTO has been included as condition 15 of the requirements for this permit unit.
- Condition 16 of the PTO has been included as condition 16 of the requirements for this permit unit.
- Condition 17 of the PTO has been included as condition 17 of the requirements for this permit unit.
- Condition 18 of the PTO has been included as condition 18 of the requirements for this permit unit.
- Condition 19 of the PTO has been included as condition 19 of the requirements for this permit unit.
- Condition 20 of the PTO has been included as condition 20 of the requirements for this permit unit.
- Condition 21 of the PTO has been included as condition 21 of the requirements for this permit unit.
- Condition 22 of the PTO has been included as condition 22 of the requirements for this permit unit.

- Condition 23 of the PTO has been included as condition 23 of the requirements for this permit unit.
- Condition 24 of the PTO has been included as condition 24 of the requirements for this permit unit.
- Condition 25 of the PTO has been included as condition 25 of the requirements for this permit unit.
- Condition 26 of the PTO has been included as condition 26 of the requirements for this permit unit.
- Condition 27 of the PTO has been included as condition 27 of the requirements for this permit unit.
- Condition 28 of the PTO has been included as condition 28 of the requirements for this permit unit.
- Condition 29 of the PTO has been included as condition 29 of the requirements for this permit unit.
- Condition 30 of the PTO has been included as condition 30 of the requirements for this permit unit.
- Condition 31 of the PTO has been included as condition 31 of the requirements for this permit unit.
- Condition 32 of the PTO has been included as condition 32 of the requirements for this permit unit.
- Condition 33 of the PTO has been included as condition 33 of the requirements for this permit unit.
- Condition 34 of the PTO has been included as condition 34 of the requirements for this permit unit.
- Condition 35 of the PTO has been included as condition 35 of the requirements for this permit unit.
- Condition 36 of the PTO has been included as condition 36 of the requirements for this permit unit.
- Condition 37 of the PTO has been included as condition 37 of the requirements for this permit unit.
- Condition 38 of the PTO has been included as condition 38 of the requirements for this permit unit.
- Condition 39 of the PTO has been included as condition 39 of the requirements for this permit unit.
- Condition 40 of the PTO has been included as condition 40 of the requirements for this permit unit.
- Condition 41 of the PTO has been included as condition 41 of the requirements for this permit unit.
- Condition 42 of the PTO has been included as condition 42 of the requirements for this permit unit.
- Condition 43 of the PTO has been included as condition 43 of the requirements for this permit unit.
- Condition 44 of the PTO has been included as condition 44 of the requirements for this permit unit.

- Condition 45 of the PTO has been included as condition 45 of the requirements for this permit unit.
- Condition 46 of the PTO has been included as condition 46 of the requirements for this permit unit.
- Condition 47 of the PTO has been included as condition 47 of the requirements for this permit unit.
- Condition 48 of the PTO has been included as condition 48 of the requirements for this permit unit.
- Condition 49 of the PTO has been included as condition 49 of the requirements for this permit unit.

b. 196 HP Emergency Standby Diesel Engine/Fire Pump (N-1026-2-1)

Permit unit N-1026-2-0 was subject to the NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 22 of the facility-wide requirements.
- Condition 2 of the PTO has been included as condition 12 of the requirements for this permit unit.

c. Ash and Fuel Storage (N-1026-4-1)

Permit unit N-1026-4-2 was subject to the NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility-wide requirements.
- Condition 2 of the PTO has been included as condition 22 of the facility wide requirements.
- Condition 3 of the PTO has been included as condition 1 of the requirements for this permit unit.
- Condition 4 of the PTO has been included as condition 2 of the requirements for this permit unit.

- Condition 5 of the PTO has been included as condition 3 of the requirements for this permit unit.
- Condition 6 of the PTO has been included as condition 4 of the requirements for this permit unit.
- Condition 7 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 8 of the PTO has been included as condition 6 of the requirements for this permit unit.
- Condition 9 of the PTO has been included as condition 7 of the requirements for this permit unit.
- Condition 10 of the PTO has been included as condition 8 of the requirements for this permit unit.
- Condition 11 of the PTO has been included as condition 9 of the requirements for this permit unit.
- Condition 12 of the PTO has been included as condition 10 of the requirements for this permit unit.
- Condition 13 of the PTO has been included as condition 11 of the requirements for this permit unit.
- Condition 14 of the PTO has been included as condition 12 of the requirements for this permit unit.
- Condition 15 of the PTO has been included as condition 13 of the requirements for this permit unit.
- Condition 16 of the PTO has been included as condition 14 of the requirements for this permit unit.
- Condition 17 of the PTO has been included as condition 15 of the requirements for this permit unit.
- Condition 18 of the PTO has been subsumed by condition 18 of the requirements for this permit unit.

d. Primary and Secondary Fuel Handling System (N-1026-5-1)

Permit unit N-1026-5-2 was subject to the NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.
- Condition 2 of the PTO has been included as condition 22 of the facility wide requirements.
- Condition 3 of the PTO has been included as condition 1 of the requirements for this permit unit.

- Condition 4 of the PTO has been included as condition 2 of the requirements for this permit unit.
- Condition 5 of the PTO has been included as condition 3 of the requirements for this permit unit.
- Condition 6 of the PTO has been included as condition 4 of the requirements for this permit unit.
- Condition 7 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 8 of the PTO has been included as condition 6 of the requirements for this permit unit.
- Condition 9 of the PTO has been included as condition 7 of the requirements for this permit unit.
- Condition 10 of the PTO has been included as condition 8 of the requirements for this permit unit.
- Condition 11 of the PTO has been included as condition 9 of the requirements for this permit unit.
- Condition 12 of the PTO has been subsumed by condition 12 of the facility wide requirements.

e. Fly Ash Handling System (N-1026-6-1)

Permit unit N-1026-6-2 was subject to the NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.
- Condition 2 of the PTO has been included as condition 22 of the facility wide requirements.
- Condition 3 of the PTO has been included as condition 1 of the requirements for this permit unit.
- Condition 4 of the PTO has been included as condition 2 of the requirements for this permit unit.
- Condition 5 of the PTO has been included as condition 3 of the requirements for this permit unit.
- Condition 6 of the PTO has been included as condition 4 of the requirements for this permit unit.
- Condition 7 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 8 of the PTO has been included as condition 6 of the requirements for this permit unit.

- Condition 9 of the PTO has been included as condition 7 of the requirements for this permit unit.
- Condition 10 of the PTO has been included as condition 8 of the requirements for this permit unit.
- Condition 11 of the PTO has been included as condition 9 of the requirements for this permit unit.
- Condition 12 of the PTO has been included as condition 10 of the requirements for this permit unit.
- Condition 13 of the PTO has been subsumed by condition 11 of the facility wide requirements.
- Condition 14 of the PTO has been included as condition 12 of the requirements for this permit unit. Record retention requirement has been increased two to five years to comply with District Rule 2520, 9.5.2.

f. Limestone/Lime Receiving and Storage (N-1026-7-1)

Permit unit N-1026-7-2 was subject to the NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.
- Condition 2 of the PTO has been included as condition 22 of the facility wide requirements.
- Condition 3 of the PTO has been included as condition 1 of the requirements for this permit unit.
- Condition 4 of the PTO has been included as condition 2 of the requirements for this permit unit.
- Condition 5 of the PTO has been included as condition 3 of the requirements for this permit unit.
- Condition 6 of the PTO has been included as condition 4 of the requirements for this permit unit.
- Condition 7 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 8 of the PTO has been included as condition 6 of the requirements for this permit unit.
- Condition 9 of the PTO has been included as condition 7 of the requirements for this permit unit.
- Condition 10 of the PTO has been included as condition 8 of the requirements for this permit unit.

- Condition 11 of the PTO has been included as condition 9 of the requirements for this permit unit.
- Condition 12 of the PTO has been included as condition 10 of the requirements for this permit unit.
- Condition 13 of the PTO has been included as condition 11 of the requirements for this permit unit.
- Condition 14 of the PTO has been included as condition 12 of the requirements for this permit unit. Record retention requirement has been increased two to five years to comply with District Rule 2520, 9.5.2.

g. Truck Unloading Station (N-1026-8-1)

Permit unit N-1026-8-2 was subject to the NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.
- Condition 2 of the PTO has been included as condition 22 of the facility wide requirements.
- Condition 3 of the PTO has been included as condition 1 of the requirements for this permit unit.
- Condition 4 of the PTO has been included as condition 2 of the requirements for this permit unit.
- Condition 5 of the PTO has been included as condition 3 of the requirements for this permit unit.
- Condition 6 of the PTO has been included as condition 4 of the requirements for this permit unit.
- Condition 7 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 8 of the PTO has been included as condition 6 of the requirements for this permit unit.
- Condition 9 of the PTO has been included as condition 7 of the requirements for this permit unit.
- Condition 10 of the PTO has been included as condition 8 of the requirements for this permit unit.
- Condition 11 of the PTO has been included as condition 9 of the requirements for this permit unit. Record retention requirement has been increased two to five years to comply with District Rule 2520, 9.5.2.

h. Emergency Generator/Diesel Engine (N-1026-9-1)

Permit unit N-1026-9-0 was subject to the NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 22 of the facility wide requirements.
- Condition 2 of the PTO has been included as condition 1 of the requirements for this permit unit.
- Condition 3 of the PTO has been included as condition 2 of the requirements for this permit unit.
- Condition 4 of the PTO has been included as condition 3 of the requirements for this permit unit.
- Condition 5 of the PTO has been included as condition 4 of the requirements for permit unit.
- Condition 6 of the PTO has been included as condition 5 of the requirements for permit unit.
- Condition 7 of the PTO has been included as condition 8 of the requirements for permit unit.
- Condition 8 of the PTO has been included as condition 9 of the requirements for permit unit.
- Condition 9 of the PTO has been included as condition 6 of the requirements for permit unit.

1. District Rule 1070, Inspections

District Rule 1070 has been submitted to the EPA to replace San Joaquin County APCD Rule 107, which is in the SIP. The requirements of these rules are compared below in table 1, showing that the District Rule is at least as stringent as the County Rule.

Table 1 – Comparison of District Rule 1070 to San Joaquin County Rule 107

REQUIREMENT	District Rule 1070	San Joaquin County Rule 107
Inspections shall be made by the enforcement agency for the purpose of obtaining information necessary to determine whether air pollution sources are in compliance with applicable rules and regulations.	✓	✓

The District has authority to require record keeping, to make inspections and to conduct tests of air pollution sources.	✓	✓
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Section 4.0 of this rule states district's authority to require record keeping, to make inspections, and to conduct tests of air pollution sources.

a. Ash and Fuel Storage (N-1026-4-1)

- Condition 14 of the requirements for permit unit N-1026-4-1 assures compliance with this rule.

b. Fly Ash Handling System (N-1026-6-1)

- Condition 12 of the requirements for permit unit N-1026-4-1 assures compliance with this rule.

c. Limestone/Lime Receiving and Storage (N-1026-7-1)

- Condition 12 of the requirements for permit unit N-1026-7-1 assures compliance with this rule.

d. Truck Unloading Station (N-1026-8-1)

- Condition 9 of the requirements for permit unit N-1026-8-1 assures compliance with this rule.

2. District Rule 1080 - Stack Monitoring

District Rule 1080 has been submitted to the EPA to replace San Joaquin County APCD Rule 108, which is in the SIP. As shown on Table 1, District Rule 1080 is at least as stringent as the San Joaquin County Rule 108.

Table 2 - Comparison of District Rule 1080 and San Joaquin County Rule 108

REQUIREMENT	District 1080	San Joaquin 108
Continuous emission monitors shall be capable of monitoring NO _x levels to within 20% with confidence levels of 95%.	✓	✓
Continuous NO _x monitors shall meet the applicable performance specifications in 40 CFR 51, App. P and 40 CFR 60, App. B, or equivalent as established by mutual agreement of the District, ARB, and EPA.	✓	✓

REQUIREMENT	District 1080	San Joaquin 108
Breakdowns must be reported within 8 hours, unless the source can prove that a longer period was necessary.	✓	✓
The District must be notified within 24 hours prior to shutdown of monitoring equipment for maintenance.	✓	✓
Violations of any emissions standards of these rules, as shown by the stack monitoring equipment, must be reported within 96 hours.	✓	✓
Quarterly reports are required.	✓	✓
Records from the monitoring equipment shall be kept for at least two years.	✓	✓

a. Babcock and Wilcox 259 MMBtu/hr biomass fired boiler (N-1026-1-3)

Section 4.0 requires the owner to install and operate continuous monitoring equipment at the request of the APCO. The owner shall maintain, calibrate, and repair the equipment and shall keep the equipment operating at design capabilities.

- Conditions 15 through 19 of the requirements for permit unit N-1026-1-3 requires a continuous emission monitoring system (CEMS).

Sections 6.5, 6.6 and 6.7 require that the continuous SO₂, NO_x, O₂, and opacity monitors meet applicable requirements of 40 CFR Part 60, Appendix B or equivalent specifications.

- Conditions 15 through 19 of the requirements for permit unit N-1026-1-3 requires that these pollutants be measured and that the CEMS meet the performance specifications of 40 CFR Part 60.

Section 7.2 requires that CEMS data be reduced according to the procedures established in 40 CFR Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or an equivalent method.

- Condition 54 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

Section 8.0 requires that quarterly reports of CEMS data be submitted to the APCO.

- Condition 52 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

Section 9.0 requires that a violation of an emission standard, as shown by the stack monitoring system, must be reported to the APCO within 96 hours.

- Condition 55 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

Section 10 requires that the owner notify the District of a breakdown of monitoring equipment as soon as reasonably possible, but no later than 8 hours after detection. In addition, the owner must notify the District of a planned shut down of monitoring equipment at least 24 hours prior to the event.

- Condition 56 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

3. District Rule 1081 Source Sampling

a. ***Babcock and Wilcox 259 MMBtu/hr biomass fired boiler (N-1026-1-3)***

District Rule 1081 has been submitted to the EPA to replace San Joaquin County APCD Rule 108.1. The requirements of these rules are compared below, showing that the District rule is at least as stringent as the County rule.

Table 3 - Comparison of District Rule 1081 and San Joaquin County Rule 108.1

Requirements	District Rule 1081	San Joaquin County APCD Rule 108.1
The owner shall provide appropriate sampling facilities	X	X
Upon request of the APCO, the source shall provide information and records to enable the APCO to determine when a representative sample can be taken.	X	X
The facility shall collect, have collected or allow the APCO to collect, a source sample.	X	X
The source shall have District personnel present at a source test.	X	
The applicable test method, if not specified in the rule, shall be in accordance with 40 CFR 60, Appendix A.	X	

Test procedures: 1) arithmetic mean of three runs 2) a scheduled source test may not be discontinued solely due to the failure to meet the applicable standard(s), an 3) arithmetic mean of two runs is acceptable if circumstances beyond owner or operator control occurs.	X	
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This rule specifies methods and procedures for source testing, sample collection, and compliance determination.

- Conditions 32 through 36 of the requirements for permit unit N-1026-1-3 assure compliance with this rule.

4. District Rule 2520 Federally Mandated Operating Permit Sections 9.4.2 and 9.5.2

Section 9.4.2

Section 9.4.2 requires that periodic monitoring and/or recordkeeping be performed if none is associated with a given emission limit to ensure compliance. Periodic monitoring and recordkeeping will be supported by conditions as shown on the table below:

a. 196 HP Emergency Standby Diesel Engine/Fire Pump (N-1026-2-1)

- Conditions 4, 5, 6, 7, and 8 of the requirements for permit unit N-1026-2-1 assure compliance with this rule.

b. Ash and Fuel Storage (N-1026-4-1)

- Conditions 17, and 18 of the requirements for permit unit N-1026-4-1 assure compliance with this rule.

c. Primary and Secondary Fuel Handling System (N-1026-5-1)

- Conditions 11, and 12 of the requirements for permit unit N-1026-5-1 assure compliance with this rule.

d. Fly Ash Handling System (N-1026-6-1)

- Conditions 13, 14, 16, 17, and 18 of the requirements for permit unit N-1026-6-1 assure compliance with this rule.

e. Limestone/Lime Receiving and Storage (N-1026-7-1)

- Conditions 13, 14, 15, and 16 of the requirements for permit unit N-1026-7-1 assure compliance with this rule.

f. Truck Unloading Station (N-1026-8-1)

- Condition 11 of the requirements for permit unit N-1026-8-1 assures compliance with this rule.

g. Emergency Generator/Diesel Engine (N-1026-9-1)

- Conditions 10 and 11 of the requirements for permit unit N-1026-9-1 assure compliance with this rule.

Section 9.5.2

Section 9.5.2 requires retention of records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report.

This will be supported by the following conditions in the requirements of these permit units.

a. Babcock and Wilcox 259 MMBtu/hr biomass fired boiler (N-1026-1-3)

- Condition 57 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

b. Ash and Fuel Storage (N-1026-4-1)

- Condition 18 of the requirements for permit unit N-1026-4-1 assures compliance with this rule.

c. Primary and Secondary Fuel Handling System (N-1026-5-1)

- Condition 12 of the requirements for permit unit N-1026-5-1 assures compliance with this rule.

d. Fly Ash Handling System (N-1026-6-1)

- Condition 12 of the requirements for permit unit N-1026-6-1 assures compliance with this rule.

e. Limestone/Lime Receiving and Storage (N-1026-7-1)

- Condition 12 of the requirements for permit unit N-1026-7-1 assures compliance with this rule.

f. Truck Unloading Station (N-1026-8-1)

- Condition 9 of the requirements for permit unit N-1026-8-1 assures compliance with this rule.

g. Emergency Generator/Diesel Engine (N-1026-9-1)

- Condition 13 of the requirements for permit unit N-1026-9-1 assures compliance with this rule.

5. District Rule 4001, New Source Performance Standards

District Rule 4001 has been submitted to the EPA to replace San Joaquin County Rule 422, which is in the SIP. District Rule 4001 specifically requires that the provisions of Part 60, Chapter 1, Title 40, Code of Federal Regulations, in effect on April 14, 1999, are adopted by reference and made a part of the rule. Therefore District Rule 4001 is more stringent than San Joaquin County Rule 422.

a. Babcock and Wilcox 259 MMBtu/hr biomass fired boiler (N-1026-1-3)

- Condition 21 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

6. District Rule 4201, Particulate Matter Concentration

EPA issued a relative stringency finding, dated August 20, 1996 stating that district Rule 4201 is more stringent than SIP approved San Joaquin County Rule 404.

a. Babcock and Wilcox 259 MMBtu/hr biomass fired boiler (N-1026-1-3)

District Rule 4201 limits the concentration of total suspended particulate matter emission to not exceed 0.1 grains per cubic foot of gas at dry standard conditions. Therefore, the particulate matter emissions can be calculated as below.

$$\left(\frac{7,000 \text{ gr}}{1 \text{ lb}} \right) \left(\frac{10^6 \text{ Btu}}{9240 \text{ dscf}} \right) \left(\frac{0.17 \text{ lbs PM}}{2,000 \text{ lb wood}} \right) \left(\frac{1 \text{ lb wood}}{5,200 \text{ Btu}} \right) = 0.012 \text{ gr/dscf} < 0.1$$

Where:

5,200 Btu/lb wood = a standard Btu content of wood, (AP-42, Table 1.6-1)

1 MMBtu/9,240 dscf = F factor used for wood (40CFR60, App.A, Table 19-1)

0.17 lb PM/Ton of wood = PM emission factor for wood, (AP-42, Table 1.6-1)

- Condition 5 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

7. District Rule 4202, Particulate Matter - Emission Rate

EPA issued a relative stringency finding dated August 20, 1996 stating that District Rule 4202 is more stringent than SIP approved San Joaquin County Rule 405. This rule applies to any source operation, which emits particulate matter. The maximum allowable emission rate is given as a function of the process weight rate as demonstrated in section 4 of District Rule 4202.

a. *Bottom Ash and Fuel Storage (N-1026-4-1)*

The total amount of fuel received, stockpiled, and moved shall not exceed 1530 tons dry per day which is equal to a process rate of 63.8 tons/hr.

Under District Rule 4202, the following equation is for the maximum allowable emission rate, E, for process weight rate greater than 30 tons/hr.

$$E = 17.31 P^{0.16}$$

E = Maximum allowable emissions in lbs/hr

P = Process weight rate in tons/hr

For P = 63.8 tons/hr:

$$E = 17.31 (63.8)^{0.16} = 33.6 \frac{\text{lb}}{\text{hr}}$$

The permit unit's total PM₁₀ emissions can be calculated as follows.

Permit condition 13 limits PM₁₀ emission concentration from the stockpiling, mixing and moving of fly ash and bottom ash to less than 0.0059 pounds per ton of material received. In addition, condition 6

requires that the amount of fly ash and bottom ash produced shall not exceed 125 tons per day. Therefore PM₁₀ emissions from stockpiling, mixing and moving fly ash and bottom ash can be calculated as follows.

$$0.0059 \frac{\text{lb PM}_{10}}{\text{ton}} \times 125 \frac{\text{tons}}{\text{day}} = 0.737 \frac{\text{lb PM}_{10}}{\text{day}} \times \frac{\text{day}}{24 \text{ hr}} = 0.031 \frac{\text{lb PM}_{10}}{\text{hr}}$$

Permit condition 3 limits PM₁₀ emission concentration from the fuel and ash storage to 0.6 pounds per acre-day. The total on site ash and fuel storage are is limited to 28 acres. Therefore the PM₁₀ emissions from the fuel and ash storage can be determined.

$$0.6 \frac{\text{lb PM}_{10}}{\text{acre} - \text{day}} \times 28 \text{ acres} = 16.8 \frac{\text{lb PM}_{10}}{\text{day}} \times \frac{\text{day}}{24 \text{ hr}} = 0.7 \frac{\text{lb PM}_{10}}{\text{hr}}$$

The permit unit's total PM₁₀ will be the combination of the emissions from the stockpiling, mixing and moving of both fly ash and bottom ash and the fuel and ash storage.

$$\text{Total PM}_{10} = 0.031 \frac{\text{lb PM}_{10}}{\text{hr}} + 0.14 \frac{\text{lb PM}_{10}}{\text{hr}} = 0.17 \frac{\text{lb PM}_{10}}{\text{hr}} < 33.6 \frac{\text{lb}}{\text{hr}} \quad (\text{max. allowable})$$

- Conditions 9, 10, 11, 12, 13, and 16 of the requirements for permit unit N-1026-4-1 assure compliance with this rule.

b. Primary and Secondary Fuel Handling System (N-1026-5-1)

For the primary fuel handling system the process weight rate is 960 tons per day or 40 tons per hr.

Under District Rule 4202, the following equation is for the maximum allowable emission rate, E, for process weight rate greater than 30 tons/hr.

$$E = 17.31 P^{0.16}$$

E = Maximum allowable emissions in lbs/hr

P = Process weight rate in tons/hr

$$\text{For } P = 40 \frac{\text{tons}}{\text{hr}}:$$

$$E = 17.31 (40)^{0.16} = 31.2 \frac{\text{lb}}{\text{hr}}$$

The primary fuel handling system's PM_{10} emission concentration is limited by condition 4 to 0.00067 pounds per ton and will be less than the maximum allowable as shown in the following calculation.

$$40 \text{ tons/hr} \times 0.00067 \text{ lbs/ton} = 0.027 \text{ lbs } PM_{10} / \text{hr} < 31.2 \text{ lbs/hr (max. allowable)}$$

- Conditions 3, 4, and 10 of the requirements for permit unit N-1026-5-1 assures compliance with this rule.

For the secondary/emergency fuel handling system the process weight rate is 960 tons per day or 40 tons per hr.

Under District Rule 4202, the following equation is for the maximum allowable emission rate, E, for process weight rate greater than 30 tons/hr.

$$E = 17.31 P^{0.16}$$

E = Maximum allowable emissions in lbs/hr

P = Process weight rate in tons/hr

$$\text{For } P = 40 \frac{\text{tons}}{\text{hr}}:$$

$$E = 17.31 (40)^{0.16} = 31.2 \frac{\text{lb}}{\text{hr}}$$

The primary fuel handling system's PM_{10} emission concentration is limited by condition 6 to 0.00024 pounds per ton and will be less than the maximum allowable as shown in the following calculation.

$$40 \text{ tons/hr} \times 0.00024 \text{ lbs/ton} = 0.0096 \text{ lbs } PM_{10} / \text{hr} < 31.2 \text{ lbs/hr (max. allowable)}$$

- Conditions 5 and 6 of the requirements for permit unit N-1026-5-1 assures compliance with this rule.

For the alternate biomass handling system the process weight rate is 270 tons per day or 11.2 tons per hr.

Under District Rule 4202, the following equation is for the maximum allowable emission rate, E, for process weight rate less than or equal to 30 tons/hr.

$$E = 3.59 P^{0.62}$$

where :

E = Maximum allowable emission rate in lb/hr

P = Process weight rate in tons/hr

For P = 11.2 tons/hr:

$$E = 3.59 (11.2)^{0.62} = 16.1 \text{ lbs /hr}$$

The primary fuel handling system's PM_{10} emission concentration is limited by condition 8 to 0.00023 pounds per ton and will be less than the maximum allowable as shown in the following calculation.

$$11.2 \text{ tons/hr} \times 0.00023 \text{ lbs/ton} = 0.0026 \text{ lbs } PM_{10}/\text{hr} < 16.1 \text{ lbs /hr (max. allowable)}$$

- Conditions 7 and 8 of the requirements for permit unit N-1026-5-1 assures compliance with this rule.

c. Fly Ash Handling System (N-1026-6-1)

The amount of fly ash and ash conditioner produced from the boiler is limited by condition 7 to 85 tons per day or 3.5 tons per hour.

Under District Rule 4202, the following equation is for the maximum allowable emission rate, E, for process weight rate less than or equal to 30 tons/hr.

$$E = 3.59 P^{0.62}$$

where :

E = Maximum allowable emission rate in lb/hr

P = Process weight rate in tons/hr

For P = 3.5 tons/hr:

$$E = 3.59 (3.5)^{0.62} = 7.8 \text{ lbs /hr}$$

Since fly ash and ash conditioner PM_{10} emission concentration is limited by condition 8 to 0.0117 pounds per ton, the emission rate will be less than the maximum allowable under the rule as shown by the following calculation.

$$3.5 \text{ tons/hr} \times 0.0117 \text{ lbs/ton} = 0.041 \text{ lbs } PM_{10}/\text{hr} < 7.8 \text{ lbs /hr (max. allowable)}$$

- Conditions 7, 8, and 15 of the requirements for permit unit N-1026-6-1 assure compliance with this rule.

For the ash conditioner additive receiving operation, the amount of additive is limited by condition 7 to 103.4 tons per day or 4.3 tons per hour.

Under District Rule 4202, the following equation is for the maximum allowable emission rate, E, for process weight rate less than or equal to 30 tons/hr.

$$E = 3.59 P^{0.62}$$

where :

E = Maximum allowable emission rate in lb/hr

P = Process weight rate in tons/hr

For P = 4.3 tons/hr:

$$E = 3.59 (4.3)^{0.62} = 8.9 \text{ lbs/hr}$$

Condition 10 of the permit unit limits PM₁₀ concentration to 0.0039 pounds per ton of additive received. The following calculations shows that the emission rate will be less than the maximum allowable.

$$4.3 \text{ tons/hr} \times 0.0039 \text{ lbs/ton} = 0.017 \text{ lbs PM}_{10} / \text{hr} < 8.9 \text{ lbs/hr (max. allowable)}$$

- Conditions 9 and 10 of the requirements for permit unit N-1026-6-1 assure compliance with this rule.

d. Limestone/Lime Receiving and Storage (N-1026-7-1)

The amount of lime/limestone received is limited by condition 9 to 25 tons per day or 1.0 ton per hour.

Under District Rule 4202, the following equation is for the maximum allowable emission rate, E, for process weight rate less than or equal to 30 tons/hr.

$$E = 3.59 P^{0.62}$$

where :

E = Maximum allowable emission rate in lbs/hr

P = Process weight rate in tons/hr

For P = 1.0 ton/hr:

$$E = 3.59 (1.0)^{0.62} = 3.6 \text{ lbs/hr}$$

Condition 10 limits the emission concentration to 0.0049 pounds per ton of lime/limestone received. The following calculation shows that

PM₁₀ emissions will be less than the maximum allowable under the rule.

$$1.0 \text{ tons/hr} \times 0.0049 \text{ lbs/ton} = 0.0049 \text{ lbs PM}_{10} / \text{hr} < 3.6 \text{ lbs/hr (max. allowable)}$$

- Conditions 9, 10, and 17 of the requirements for permit unit N-1026-7-1 assure compliance with this rule.

e. Truck Unloading Station (N-1026-8-1)

The amount of material is limited by condition 6 to 1530 dry tons per day or 63.8 tons per hour.

Under District Rule 4202, the following equation is for the maximum allowable emission rate, E, for process weight rate greater than 30 tons/hr.

$$E = 17.31 P^{0.16}$$

where :

E = Maximum allowable emission rate in lbs/hr

P = Process weight rate in tons/hr

for P = 63.8 tons/hr

$$E = 17.31 (63.8)^{0.16} = 33.6 \text{ lbs/hr}$$

Condition 7 limits PM₁₀ concentration to 0.0018 pounds per dry ton of material received. The following calculations show that PM₁₀ emissions will be less than the maximum allowable under this rule.

$$63.8 \text{ tons/hr} \times 0.0018 \text{ lbs/ton} = 0.11 \text{ lbs PM}_{10} / \text{hr} < 33.6 \text{ lbs/hr (max. allowable)}$$

- Conditions 6, 7, and 10 of the requirements for permit unit N-1026-8-1 assure compliance with this rule.

8. District Rule 4301 Fuel Burning Equipment

a. Babcock & Wilcox 259 MMBtu/hr Biomass fired boiler (N-1026-1-3)

Section 5.1 requires that a source shall not discharge into the atmosphere combustion contaminants exceeding in concentration at the point of discharge, 0.1 grains per cubic foot of gas calculated to 12% of the carbon dioxide at dry standard conditions.

- Condition 5 of the requirements for permit unit (N-1026-1-3) assures compliance with this section.

Sections 5.2.1 and 5.2.2 require that no source shall emit more than 200 pounds per hour of sulfur compounds, calculated as sulfur dioxide (SO₂), and more than 140 pounds per hour of nitrogen oxides, calculated as nitrogen dioxide (NO₂).

- Conditions 8 and 9 for the requirements of permit unit N-1026-1-3 limits SO₂ to 6.25 lb/hr and NO_x to 27.2 lb/hr respectively and therefore assure compliance with this rule.

Section 5.2.3 requires that no source shall emit more than 10 pounds per hour of combustion contaminants as defined in Rule 1020 and derived from the fuel.

- Condition 6 of the requirement for permit unit N-1026-1-3 limits PM₁₀ to 8.75 lbs/hr and therefore assures compliance with this rule.

9. District Rule 4352, Solid Fuel Fired Boilers, Steam Generators and Process Heaters

The purpose of this rule is to limit emissions of NO_x from solid fuel fired boilers, steam generators, and process heaters. The rule applies to any such unit, which is part of a major NO_x source.

a. *Babcock and Wilcox 259 MMBtu/hr Biomass fired boiler (N-1026-1-3)*

Section 5.1 requires that the operator of a boiler, steam generator or process heater shall not operate such a unit in a manner that results in NO_x emissions exceeding 0.2 lb / MMBtu of heat input. Therefore, the maximum potential emissions of the boiler are:

$$0.2 \text{ lb / MMBtu} * 259 \text{ MMBtu/hr} = 51.8 \text{ lb/hr}$$

- Condition 9 of the requirements of permit unit N-1026-1-3 limits actual emissions to 27.2 lbs/hr and assures compliance with this rule.

Section 5.2 requires all NO_x and CO emission limits to be based on a 24-hour averaging period.

- Condition 20 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

Sections 5.3 limit CO emissions at dry stack gas conditions to less than 400 ppmv @ 3% O₂, or 310 ppmv @ 7% O₂ or 12% CO₂ in accordance with EPA Method 19.

The emission equivalent concentration of CO based on the current permit limitation of 54.4 lbs CO/hr is calculated as follows:

$$\frac{\left(54.4 \frac{\text{lbs CO}}{\text{hr}}\right)}{\left(259 \frac{\text{MMBtu}}{\text{hr}}\right)} = 0.21 \frac{\text{lbs}}{\text{MMBtu}}$$

Using the following equation to calculate CO emissions in ppmvd:

$$\text{emissions} \frac{\text{lbs}}{\text{MMBtu}} = \text{ppmvd} * MW * K * F * O_2$$

where:

$$K = \frac{\left(2116.8 \frac{\text{lb}}{\text{ft}^2}\right)}{\left(1545 \frac{\text{ft lb}}{\text{lb mol } ^\circ\text{R}}\right) (520 ^\circ\text{R}) (1\text{E} + 06)} = 2.63 \times 10^{-9}$$

$$MW = 28 \frac{\text{lbs}}{\text{lbs - mole}} \text{ for the molecular weight of CO}$$

$$F = 9240 \frac{\text{scf}}{\text{MMBtu}} \text{ F factor for wood (40CFR 60, App A. Table 19-1)}$$

$$O_2 = \left(\frac{20.9}{20.9 - O_2 \%}\right) = \text{Correction factor for excess oxygen in the exhaust stack.}$$

Therefore:

$$\text{ppmvd} = \frac{(0.21)}{(28 * 2.63 \times 10^{-9} * 9240 * 1.17)} = 263.8 \text{ ppmvd @ 3\% } O_2$$

263.8 ppmvd @ 3% O₂ is less than this section's limit of 400 ppmv @ 3% O₂.

- Condition 10 of the requirements for permit unit N-1026-1-3 limits CO emissions to 54.4 lbs/hr and therefore assures compliance with this rule.

Section 5.5 requires that units using ammonia injection as a NO_x control technique shall operate a Continuous Emission Monitoring (CEM) to monitor and record NO_x concentration, CO₂ or O₂. This CEM System shall be operated, maintained and calibrated pursuant to the provision of this Section.

- Conditions 15 through 19 of the requirements for permit unit N-1026-1-3 assure compliance with this rule.

Section 6.2 states that, except for municipal solid waste fired units, the owner/operator shall maintain an operating log for each unit that includes on a monthly basis:

1. Type and quantity of fuel used.
2. The higher heating value (hhv) of each fuel as determined by section 6.4, or as certified by a third party fuel supplier.

Conditions 22 and 50 of the requirements for permit unit N-1026-1-3 assure compliance with this rule.

Section 6.3 requires each unit to be tested at least once every calendar year, to determine compliance with the applicable requirements of section 5.

- Condition 32 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

Section 6.4.1 establishes test method requirements including source testing procedures and methods.

- Conditions 39 to 49 of the requirements for permit unit N-1026-1-3 assure compliance with this rule.

Section 6.4.2 requires that all emission measurement shall be made with the unit operating at condition representative of normal operation.

- Condition 51 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

Section 6.4.3 require that all compliance to the emissions limits shall not be established within two hours after a continuous period in which the fuel flow to the unit is zero, or is shut off for 30 minutes.

- Condition 51 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

10. District Rule 4801 Sulfur Compounds

District Rule 4801 has been submitted to the EPA to replace the old county rules that are SIP approved. The table below lists all the applicable requirements of District Rule 4801 and shows which are included in the rule from the old SIP approved rule. This table shows that District Rule 4801 is as stringent as the San Joaquin County rule 407, thus rule 407 is subsumed by rule 4801 for the purposes of the operating permit.

Table 4 – Comparison of District Rule 4801 to San Joaquin County Rule 407

Requirements	District Rule 4801	San Joaquin County Rule 407
a person shall not discharge into the atmosphere sulfur compounds exceeding in concentration at the point of discharge 0.2 percent by volume calculated as sulfur dioxide on a dry basis averaged over 15 consecutive minutes.	✓	✓
EPA Method 8 and ARB Method 1-100 shall be used to determine such emissions.	✓	

a. Babcock and Wilcox 259 MMBtu/hr biomass fired boiler (N-1026-1-3)

This unit is fired on organic material primarily consisting of wood. Therefore, the sulfur emission is calculated below.

Convert ppmv to lb/dscf:

$$200 \cdot ppmv \cdot \left(\frac{64.2}{385.1 \times 10^6} \right) = 33.34 \times 10^{-6} \cdot lb / dscf$$

where:

$$\frac{M}{385.1 \times 10^6} = \text{Conversion factor (AP-42 Appendix A.)}$$

$$M = 64.2 \text{ (SO}_2 \text{ Molecular weight)}$$

Convert lb/dscf to lb/hr:

$$\left(\frac{9,240 \cdot dscf}{10^6 \cdot Btu} \right) \left(\frac{259 \cdot MMBtu}{1 \cdot hour} \right) \left(\frac{33.34 \times 10^{-6} \cdot lb}{dscf} \right) = 79.8 \cdot lb / hour$$

where: 9240 = F factor used for wood

- Condition 8 of the requirements for permit unit N-1026-1-3 limits SOx emissions to 6.25 lbs/hour and therefore assures compliance with this rule.

11. 40 CFR Part 60 Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

a. *Babcock and Wilcox 259 MMBtu/hr biomass fired boiler (N-1026-1-3)*

- **40 CFR60.43b (c)(1) & 40CFR60.43b (e)**

The requirements of this section specify that no operator of a facility that combusts wood, or wood with other fuels except coal, shall cause to be emitted any gases that contain more than 0.1lb PM/MMBtu heat input for a capacity factor greater than 30 percent (0.30) for wood.

The capacity factor is determined in 40CFR60.43b (e) dividing the actual heat input to the steam generating unit during the calendar year when burning wood, coal or other fuel by the potential heat input to the steam generator if it had been operating for 8760 hours at maximum design heat input capacity.

The 1996 calendar year process rate of wood waste was 124,172 tons. The heat input required for each ton of wood waste is 16MMBtu/ton (as shown in the compliance plan).

Actual heat input = 124,172 tons*(16MMBtu/ton)= 1,986,752 MMBtu.

The potential heat input to the boiler at the maximum design capacity is given by:

Potential heat input = 259 MMBtu/hr * 8760 hours = 2,268,840 MMBtu.

The capacity factor is given by dividing the Actual heat input by the potential heat input:

Capacity Factor = $1,986,752 / 2,226,840 = .88$ (88 percent).

Therefore, the particulate matter emission will be limited to 0.1 lb/MMBtu and the maximum allowable emissions limit is:

$0.1 \text{ lb/MMBtu} * 1,986,752 \text{ MMBtu} = 198,675.2 \text{ lb / year} = 22.7 \text{ lb/hr}$

Condition 6 and 7 of the requirements for permit unit N-1026-1-3 limits particulate matter and PM_{10} to 8.75 lbs/hr and assure compliance with this rule.

- **40 CFR 60.43b (f)**

The requirements of this section state that the opacity of any discharged gases shall be limited to 20% opacity (6-minute average) except for one 6-minute period per hour of not more than 27% opacity.

- Condition 1 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

- **40 CFR 60.44b (d)**

This subpart sets the standard for nitrogen oxide not to exceed 0.3 lb/MMBtu for any boiler fired on wood fuel.

- Condition 58 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

- **40 CFR 60.44b (i)**

The requirements of this section specify that compliance with the emission limits is determined on a 30-day rolling average basis.

- Condition 20 of the requirements of permit unit N-1026-1-3 assures compliance with this rule.

- **40CFR60.49b (g), 40CFR60.49b(h), 40CFR60.49b(i)**

These sections specify reporting and recordkeeping requirements for facilities subject to Subpart Db - Standards of performance of Industrial - Commercial - Institutional Steam Generating Units.

- Condition 52 and 53 of the requirements for permit unit N-1026-1-3 assures compliance with this rule.

X. PERMIT SHIELD

A permit shield legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Title V permit. Compliance with the terms and conditions of the Operating Permit is considered compliance with all applicable requirements upon which those conditions are based, including those that have been subsumed.

A. Requirements Addressed by Model General Permit Templates

By using model general permit template SJV-UM-0-1, the applicant has requested that a permit shield be issued for the facility wide requirements. The basis for this permit shield is discussed in section IV of the Template SJV-UM-0-1. This permit shield is included in condition 38 and 39 of the facility-wide requirements N-1026-0-1.

By using model general permit template SJV-IC-1-0, the applicant has requested that a permit shield be issued for all applicable requirements identified by the template. The basis for this permit shield is discussed in section IV of the Template SJV-IC-1-0. This permit shield is included in conditions 10 and 11 of the requirements for permit unit N-1026-2-1, and conditions 14 and 15 of the requirements for permit unit N-1026-9-1.

B. Requirements not Addressed by Model General Permit Templates

The applicant is requesting a permit shield for each of the requirements listed below:

1. District Rule 1080

Compliance with this requirement was address in Section IX of this document and assured by condition 15 through 19 and conditions 53 through 57 of the requirements for permit unit N-1026-1-3. Therefore, a permit shield is being granted in the requirements for permit unit N-1026-1-3 as condition 59.

2. District Rule 1081

Compliance with this requirement was address in Section IX of this document and assured by conditions 33 through 36 of the

requirements for permit unit N-1026-1-3. Therefore, a permit shield is being granted in the requirements for permit unit N-1026-1-3 as condition 60.

3. District Rule 4201

Compliance with this requirement was address in Section IX of this document and is assured by condition 5 of the requirements for permit unit N-1026-1-3. Therefore, a permit shield is being granted in the requirements for permit unit N-1026-1-3, condition 61.

4. District Rule 4202, Section 4.0

Compliance with this requirement was address in Section IX of this document and is assured by conditions 9, 10, 11, 12, 13, and 16 of the requirements for permit unit N-1026-4-1; conditions 3 through 8, and 10 of the requirements for permit unit N-1026-5-1; conditions 7 through 10, and 15 of the requirements for permit unit N-1026-6-1; conditions 9, 10, and 17 of the requirements for permit unit N-1026-7-1, and conditions 6, 7, and 10 of the requirements for permit unit N-1026-8-1. Therefore, a permit shield is being granted in the requirements for permit unit N-1026-4-1 as condition 19; permit unit N-1026-5-1 as condition 13; permit unit N-1026-6-1 as condition 19; permit unit N-1026-7-1 as condition 18; permit unit N-1026-8-1 as condition 12.

5. District Rule 4301, Sections 5.1, 5.2.2, and 5.2.3

Compliance with this requirement was addressed in Section IX of this document and was assured by condition 5, 6, and 9 of the requirements for permit unit N-1026-1-3. Therefore a permit shield is being granted in the requirements for permit unit N-1026-1-3, condition 62.

6. District Rule 4352, Sections 5.1, and 5.3

Compliance with this requirement was addressed in Section IX of this document and was assured by condition 9 and 10 of the requirements for permit unit N-1026-1-3. Therefore a permit shield is being granted in the requirements for permit unit N-1026-1-3, condition 63.

7. District Rule 4801

Compliance with this requirement was addressed in Section IX of this document and is subsumed by condition 8 of the requirements for permit unit N-1026-1-3. Therefore a permit shield is being granted in the requirements for permit unit N-1026-1-3 as condition 64.

XI. PERMIT CONDITIONS

See permit conditions beginning on the following page.

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ATTACHMENT A

DETAILED FACILITY PRINTOUT

ATTACHMENT B

INSIGNIFICANT ACTIVITIES/EQUIPMENT

The following equipment has insignificant activities according to the applicant submittal TVF500 form

Exemption Category	Rule 2020 Citation	X
Piston-type I.C. engine with maximum continuous rating of 50 horsepower (bhp) or less	5.1.2	X
Containers used to store clean produced water	5.7.1	X
Blazing, soldering, or welding equipment	5.10.1	X
Fugitive emissions sources assoc. with exempt equipment	5.10.3	X
Containers with a capacity \leq 250 gallons used to store organic material where the actual storage temperature $<$ 150 F	5.7.4	X
Containers used to store petroleum distillates used as motor fuel with specific gravity \geq 0.8251	5.7.7	X
Containers used to store unheated organic materials with an initial boiling point \geq 302 F	5.7.6	X
Containers used to store refined lubricating oils.	5.7.8	X
Unheated, non-conveyorized degreasers $<$ 10 ft ² open area; using solvents with initial boiling point \geq 248 F; and $<$ 25 gal/yr. Evaporative losses.	5.9.2	X
Non-structural repairs & maintenance to permitted equipment	4.2.6	X
Emissions less than 2 lb/day from units not included above	4.2.1	X

ATTACHMENT C

PREVIOUS PERMIT TO OPERATE

